UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,473	01/10/2002	Anthony J. Cesaroni	33477.242985	9908

826 7590 08/20/2003

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER	
KOCZO JR, MICHAEL	
ART UNIT	**PAPER NUMBER**
3746	8

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,473	CESARONI ET AL.	
	Examiner	Art Unit	
	Michael Koczo, Jr.	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2003* .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-29* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

In view of applicant's arguments and amendments to the claims, the restriction requirement is modified as follows:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

Elected I. Claims 9 to 14, drawn to a hybrid propulsion system wherein the aqueous solution of hydrogen peroxide contains an additional oxydizer, classified in class 60, subclass 251.

II. Claims 15 to 18, drawn to a hybrid propulsion system wherein the fuel grain contains a metal, classified in class 60, subclass 251.

III. Claims 19 and 20, drawn to a hybrid propulsion system wherein the fuel grain contains a solid oxidizer, classified in class 60, subclass 251.

IV. Claims 21 and 22, drawn to a hybrid propulsion system wherein the fuel grain contains an energetic filler, classified in class 60, subclass 251.

V. Claims 23 and 24, drawn to a hybrid propulsion system wherein the fuel grain contains an energetic plasticizer, classified in class 60, subclass 251.

VI. Claims 25 and 26, drawn to a hybrid propulsion system wherein the fuel grain contains an energetic polymer, classified in class 60, subclass 251.

VII. Claim 27, drawn to a hybrid propulsion system wherein the fuel grain contains a ballistic or processing modifier, classified in class 60, subclass 251.

The inventions are distinct, each from the other because of the following reasons:

Inventions I to VII are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility because it does not require a fuel grain containing a metal, a fuel grain with a solid oxidizer, a fuel grain with an energetic filler, a fuel grain with an energetic plasticizer, a fuel grain with an energetic polymer, a fuel grain with a ballistic or processing modifier, or a fuel grain with an hydrogen peroxide decomposition catalyst. Each of the other inventions likewise does not require the features of any of the remaining inventions for its operation. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Claims 1 to 8, ~~18~~, 28 and 29 link the inventions and will be examined with the claims of the elected invention subject to the election of species requirement which follows.

This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A wherein the catalyst in the injector system is platinum;

Species B wherein the catalyst in the injector system is silver;

Species C wherein the catalyst in the injector system is platinum coated nickel;

Species D wherein the catalyst in the injector system is silver coated nickel;

Elected Species E wherein the catalyst in the injector system is nickel coated with a combination of silver and samarium nitrate;

Species F wherein the catalyst in the solid fuel section is platinum;

Species G wherein the catalyst in the solid fuel section is silver;

Species H wherein the catalyst in the solid fuel section is platinum coated nickel;

Species I wherein the catalyst in the solid fuel section is silver coated nickel;

Species J wherein the catalyst in the solid fuel section is nickel coated with a combination of silver and samarium nitrate;

Species K wherein the catalyst in the solid fuel section is potassium permanganate;

Species L wherein the catalyst in the solid fuel section is manganese dioxide; and

Species M wherein the hydrogen peroxide is decomposed by the use of heat.

If group I is elected, then election is further required between the following species:

Species N wherein the aqueous solution of hydrogen peroxide contains ammonium dinitramide.

Species O wherein the aqueous solution of hydrogen peroxide contains hydrazinium nitroformate.

Species P wherein the aqueous solution of hydrogen peroxide contains ammonium dinitramide and hydrazinium nitroformate.

Species Q wherein the oxidizer includes chlorates.

Species R wherein the oxidizer includes perchlorates.

Elected Species S wherein the oxidizer includes nitrates.

If group II is elected, then election is further required between the following species:

Species T wherein the hydro-reactive metal is aluminum.

Species U wherein the hydro-reactive metal is magnesium.

Species V wherein the hydro-reactive metal is boron.

Species W wherein the hydro-reactive metal is beryllium.

Species X wherein the hydro-reactive metal is lithium.

Species Y wherein the hydro-reactive metal is silicon.

Species Z wherein the hydro-reactive metal is a mixture of metals, which mixture must be specified in the election.

Species AA wherein the hydro-reactive metal is a hydride form, which hydride form must be specified in the election.

If group III is elected, then election is further required between the following species:

Species BB wherein the solid oxidizer is ammonium perchlorate.

Species CC wherein the solid oxidizer is ammonium nitrate.

Species DD wherein the solid oxidizer is hydrazinium nitroformate.

Species EE wherein the solid oxidizer is ammonium dinitramide.

Species FF wherein the solid oxidizer is hydroxylammonium nitrate.

Species GG wherein the solid oxidizer is hydroxylammonium perchlorate.

Species HH wherein the solid oxidizer is nitronium perchlorate.

Species II wherein the solid oxidizer is a mixture of the above, which mixture must be specified in the election.

If group IV is elected, then election is further required between the following species:

Species JJ wherein the energetic filler is cyclotrimethylene trinitramine.

Species KK wherein the energetic filler is cyclotetramethylene tetranitramine.

Species LL wherein the energetic filler is hexanitroisoazowurzitane.

Species MM wherein the energetic filler is a mixture of the above, which mixture must be specified in the election.

If group V is elected, then election is further required between the following species:

Species NN wherein the energetic plasticizer is butanetriol trinitrate.

Species OO wherein the energetic plasticizer is trimethylolethane trinitrate.

Species PP wherein the energetic plasticizer is triethyleneglycol dinitrate.

Species QQ wherein the energetic plasticizer is glycidyl azide plasticizer.

Species RR wherein the energetic plasticizer is a mixture of the above, which mixture must be specified in the election.

If group VI is elected, then election is further required between the following species:

Species SS wherein the energetic polymer is glycidyl azide polymer.

Species TT wherein the energetic polymer is bisazidomethyloxetane/azidomethyl-methoxetane copolymer.

Species UU wherein the energetic polymer is nitramethylmethoxetane polymers.

Species VV wherein the energetic polymer is a mixture of the above, which mixture must be specified in the election.

Applicant is required under 35 U.S.C. 121 to elect one of species A through M and conditionally one of species N through VV, depending on which group of inventions is elected, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Any inquiry relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is 703-306-5648.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Michael Koczo, Jr.
Primary Examiner
Group Art Unit 3746

M. Koczo, Jr./mnk
August 19, 2003
TEL 703-308-2630
M-F 7:30 to 16:00
FAX 703-872-9302
After Final FAX 703-872-9303